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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,299	05/24/2001	Toyonori Sasaki	103007.01	9529
25944	7590	11/18/2003	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			NGHIEM, MICHAEL P	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/863,299

Applicant(s)

SASAKI, TOYONORI

Examiner

Michael P Nghiem

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003 and 17 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,46-54,56-68 and 70-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51,52,56-61 and 72 is/are allowed.
- 6) ☒ Claim(s) 1,46,47,49,53,62-67 and 70 is/are rejected.
- 7) ☒ Claim(s) 48,50,54,68,71 and 73 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/280,056.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

The Amendments filed on September 8, 2003 and September 17, 2003 have been acknowledged.

### ***Withdrawal of Allowability***

1. The indicated allowability of claims 1, 46, 47, 49, 53, 62-67, and 70 is withdrawn in view of the reference(s) to Kanaya et al. (US 6,247,803), Ceschin et al. (US 5,489,932), and Shinada et al. (US 5,790,158). Rejections based on the newly cited reference(s) follow.

### ***Claim Objections***

2. Claims 54, 64, 66, 70, 71, and 73 are objected to because of the following informalities:

- claims 54, 71, "the other of the chambers" should be – the second chamber --.
- claim 64, "the hole" lacks antecedent basis. Which one?
- claim 66, "...wherein the path and the first chamber are connected via a surface which does not contain an intersection line formed by the intersection of two surfaces" is in conflict with Fig. 12. Fig. 12 shows surface of (14) contains an intersection line (curve line of (14) intersecting surface of (8). Examiner recommends that "an intersection line

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formed by the intersection of two surfaces” be changed to -- an intersection line formed by the intersection of the surfaces of a cover and the partition --.

- claim 70, are the first and second chambers related to the ink chamber of claim 53?

- claim 73, “of” (line 12) should be – at --.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 46, 47, and 62-64 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanaya et al. (US 6,247,803).

Regarding claims 1, 62, and 64, Kanaya et al. discloses an ink cartridge (10000) for holding ink (Fig. 35), comprising:

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- a case (case of 10000) having a first surface (top surface of 10000) on the outside of the case and a second surface (bottom surface of 10000) on the outside of the case in mutual opposition (Fig. 35), the first surface being open (without 2400);
- a first cover (2400) for covering the first surface;
- a partitioning wall (610) for separating the interior of the case into a first chamber (611) and a second chamber (612), respectively, for holding the ink;
- a porous material (615) accommodated in the first chamber;
- an ink filling hole (right hole in 2400) formed in the first cover, the ink filling hole communicating with the second chamber;
- a pressure reduction hole (10100) formed in the first cover (Fig. 35), the pressure reduction hole communicating with the first chamber (Fig. 35), wherein the first chamber and the second chamber communicate with each other near the second surface inside the case (via 610') such that the ink is filled in the first chamber through the second chamber from the ink filling hole (Fig. 35).

Regarding claim 46, Kanaya et al. discloses an ink discharge hole (623) for discharging ink from the first chamber or the second chamber is formed in the second surface of the case (Fig. 35).

Regarding claim 47, Kanaya et al. discloses that the second surface is also open (without bottom wall of 10000), a second cover (bottom wall of 10000) is provided for

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covering the second surface, and the ink discharge hole is formed in the second cover (Fig. 35).

Regarding claim 62, Kanaya et al. further discloses that the second chamber is formed between one side wall (right side wall of case) of the case and the partitioning wall and at least one portion of the one side wall is transparent or semi-transparent (column 14, lines 64-67).

Regarding claim 63, Kanaya et al. discloses that the first chamber has a larger capacity than the second chamber (Fig. 35) and accommodates a porous material absorbing ink (615).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 53, 66, and 70 are rejected under 35 U.S.C. 102(b) as being anticipated by Ceschin et al. (US 5,489,932).

Regarding claims 53 and 66, Ceschin et al. discloses an ink cartridge (10) for holding ink supplied to a recording head (12), comprising:

- a case (case of 10) having a first surface (top surface of case) on the outside of the case and a second surface (bottom surface of case) on the outside of the case in opposition, the first and second surfaces being open (without 14c and 14b);

- a partitioning wall (14aa) formed integrally with the case and extending from the first surface toward the second surface (Fig. 1) for separating the interior of the case into an ink chamber (15) for holding ink and an atmosphere connection path (30) communicating to the outside of the case (via 32), the ink chamber being open on the first surface side and the second surface side (without 14c and 14b);

- a first cover (14c) which is a separate part from the case and is joined to the case and the partitioning wall at the first surface for covering the first surface of the case (Fig. 1), the first cover, the case and the partitioning wall forming a path for communicating air between the ink chamber and the atmosphere connection path (via 37);

- a second cover (14b) which is a separate part from the case and is joined to the case at the second surface for covering the second surface of the case (Fig. 1);

- an ink supply hole (18) which is joined to the recording head and is formed in the second cover so as to communicate with the ink chamber (Fig. 1).

Regarding claim 66, Ceschin et al. further discloses that the path and the first chamber are connected via a surface (bottom surface of 37) which does not contain an

intersection line formed by the intersection of two surfaces (bottom surface of 37 does not contain an intersection of surfaces, Fig. 1).

Regarding claim 70, Ceschin et al. discloses a first chamber (15) communicates with the atmosphere connection path (30) near the first surface (via 37), and communicates with a second chamber (19) near the second surface, and the second chamber communicates with the ink supply hole (Fig. 1).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanaya et al. in view of Shinada et al. (US 5,790,158).

Kanaya et al. discloses all the claimed features of the invention as discussed above except:

- the ink filling hole and the pressure reduction hole are closed off by a first sealing material applied to the first cover;



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- the ink discharge hole is closed off by a second sealing material applied to the second surface so that the second sealing material can be peeled away;
- an inner surface of the one side wall has undulating ribs extending vertically up and down.

Nevertheless, regarding claim 49, Shinada et al. discloses an ink filling hole (515) and the pressure reduction hole (514) are closed off by a first sealing material (542) applied to a first cover (516) for the purpose of preventing ink evaporation from the holes and the ink discharge hole (513) is closed off by a second sealing material (546) applied to the second surface for the purpose of preventing ink leakage from the ink supply port.

Regarding claim 65, Shinada et al. discloses an inner surface of the one side wall has undulating ribs (5118) extending vertically up and down (Fig. 17) for the purpose of allowing ink to flow easily (column 15, lines 28-31).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Kanaya et al. with the first and second sealing materials and ribs as disclosed by Shinada et al. for the purposes of improving ink containment and ink flow.

Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ceschin et al. in view of Shinada et al..

Ceschin et al. further discloses a porous material (17) absorbing ink is accommodated in the first chamber (Fig. 1).

However, Ceschin et al. does not disclose a projecting part that projects to the inside of the first chamber is formed on the upper surface of the case, at a position apart from the partitioning wall, and the projecting part pushes against the porous material in the first chamber.

Nevertheless, Shinada et al. discloses an ink container (Figs. 15a, 15b) comprising a projecting part (516a, 516b) that projects to the inside of the first chamber is formed on the upper surface of the case, at a position apart from the partitioning wall, and the projecting part pushes against the porous material in the first chamber (Figs. 15a, 15b) for the purpose of improving the capillarity of the porous material.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ceschin et al. with a projecting part as disclosed by Shinada et al. for the purpose of improving the capillarity of the porous material.

***Allowable Subject Matter***

6. Claims 48, 50, 54, and 68 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 71 and 73 would be allowable if rewritten or amended to overcome the objections set forth in this Office action.

8. Claims 51, 52, 56-61, and 72 are allowed.

### ***Reasons For Allowance***

9. The combination or method as claimed wherein an ink cartridge including an atmosphere connection hole for communicating with the first chamber is formed in the second cover (claim 48) or one end of the atmosphere connection chamber communicates with the ink chamber on the first surface side to communicate air between the ink chamber and the atmosphere connection chamber, and the other end of the atmosphere connection chamber communicates with the outside of the case (claim 51) or a second partitioning wall for dividing the ink chamber into a first chamber for accommodating a porous material absorbing ink and a second chamber holding ink, wherein one of the first chamber and the second chamber is covered by the first cover and the other of the chambers is covered by the second cover (claims 54, 71) or one end of the atmosphere connection path communicates with the other end of the first chamber for communicating substantially only air between the atmosphere connection path and the first chamber via the second partitioning wall and the other end of the atmosphere connection path is open to the outside of the case (claim 56) or the path is formed by a concavity on the outside surface of the upper surface of the case,

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extending from the first chamber to the atmosphere connection chamber, a first hole connecting the concavity and the first chamber, a second hole connecting the concavity and the atmosphere connection chamber, and sealing material covering the concavity (claim 68) or joining a cover which is separate from the case to the case at the second surface for covering the second surface (claims 72, 73) is not disclosed, suggested, or made obvious by the prior art of record.

### ***Response to Arguments***

10. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ishinaga (US 6,474,796) discloses a method of filling ink into an ink cartridge (Figs. 1's – 6's).

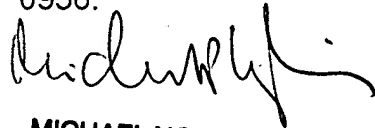
### ***Contact Information***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read "Michael Nghiem", with a stylized flourish at the end.

**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**

Michael Nghiem

November 13, 2003